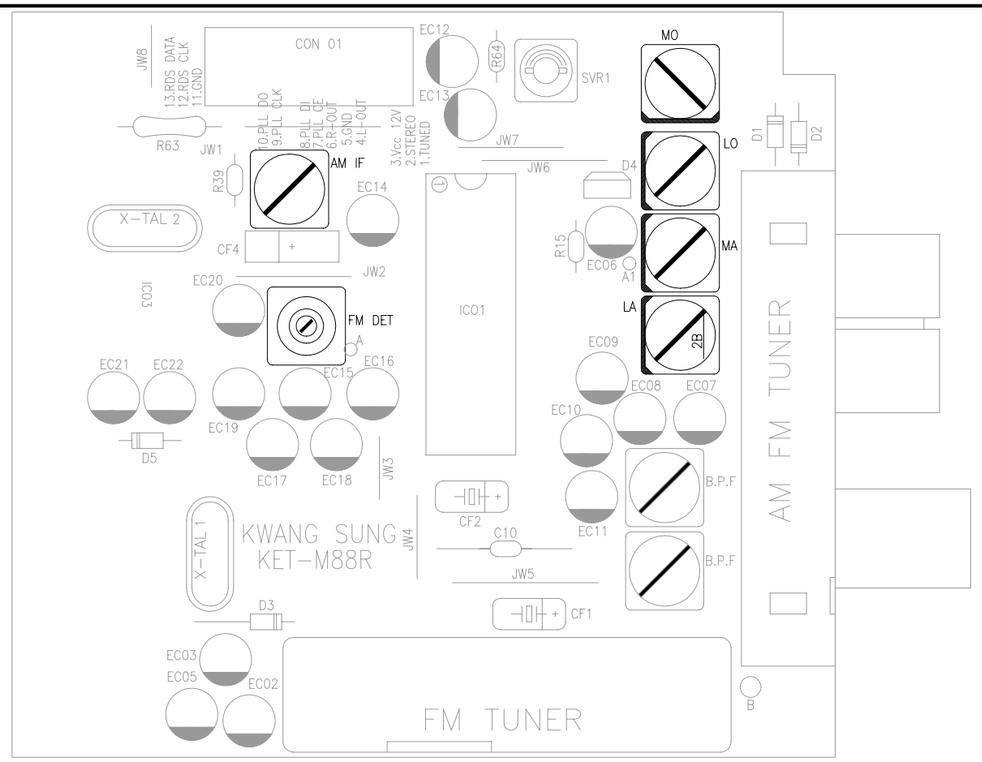
1. Alignment and Adjustments

1-1. Tuner



* Adjustment Location of Tuner PCB

ITEAM	AM(MW) OSC	AM(MW) RF	LW OSC	AM(MW) RF	SW1 OSC	SW1 RF	SW2 OSC	SW2 RF
Received FREQ.	522~1611 KHz	594 KHz	146~290 KHz	150 KHz	2.3~7.3 MHz	3.5MHz	9.5~26.1MHz	10MHz
Adjustment point	MO	MA	LO	LA	LO	MA	LO	MA
Output	1~7.0±0.5V	Maximum Output (Fig1-4)	2~7.0±0.5V	Maximum Output (Fig1-4)	1~8V±1V	Maximum Output (Fig1-4)	1~8V±1V	Maximum Output (Fig1-4)

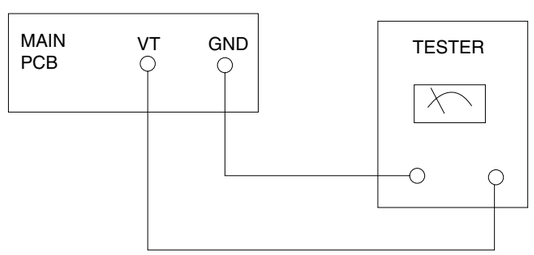


Fig 1-4 OSC Voltage

FM THD Adjustment	
SSG FREQ.	98 MHz
Adjustment point (FM DET)	FM DETECTOR COIL
Output	60 dB
Minumum Distortion (0.4% below) (Figure 1-1)	

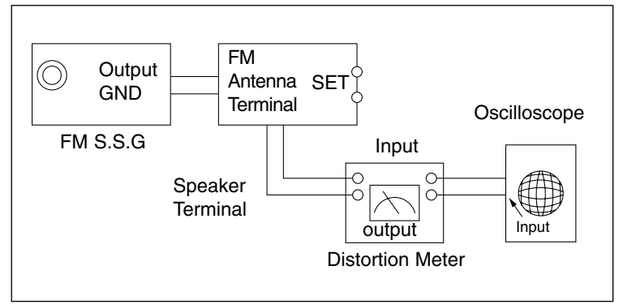


Figure1-1 IF CENTER and THD Adjustment

FM Search Level Adjustment	
SSG FREQ.	98 MHz
Adjustment point (SVR1)	BEACON SENSITIVITY SEMI-VR(10KΩ)
Output	28 dB(±2dB)
Adjust SVR1 so that “TUNED” of FLT is lighted (Figure 1-2)	

*Adjust FM S.S.G level to 28dB

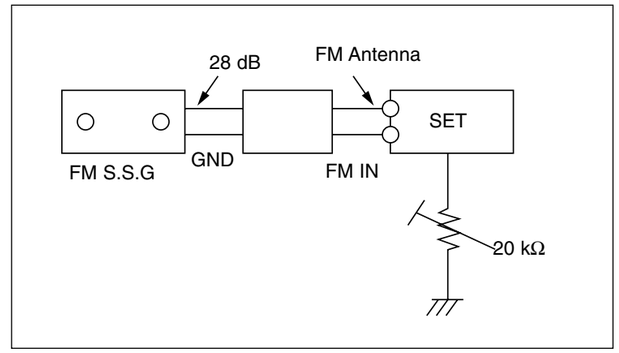


Figure1-2 FM Auto Search Level Adjustment

AM(MW) I.F Adjustment	
SSG FREQ.	450 kHz
Frequency	522 kHz
Adjustment point	AM IF
Maximum output (Figure 1-3)	

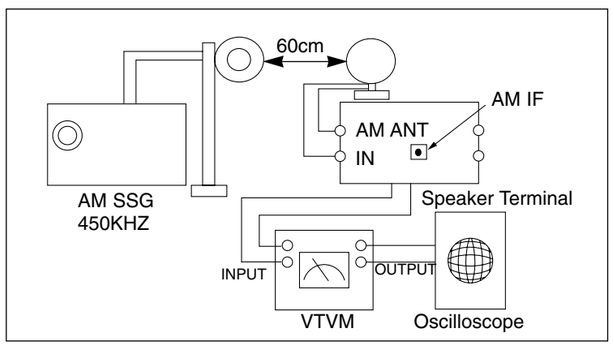


Figure1-3 AM I.F Adjustment

1-2 Cassette Deck

1-2-1To Adjust Tape Speed

Notes

1) Measuring tape: i) MTT-111 (or equivalent)
(Tapes recorded with 3kHz)
ii) MTT-5512 (or equivalent)
iii) MTT-112B (or equivalent)
2) Connect the cassette deck to the frequency counter as in figure 1-5.

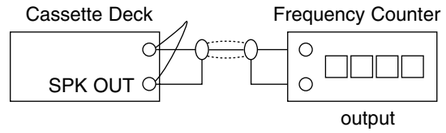


Figure 1-5

Step	Item	Pre-Setup Condition	Pre-Setup	To Adjust	Standard	Remark
1	NOR SPEED Control	OUT (connected to the frequency counter)	1) Deck 1:MTT-111 2) Press PLAY SW button 3) Deck 2:Same as above	Turn VSR1 to left and right (FRONT PCB)	3KHz	±1% range

1-2-2. Adjust REC Bias Voltage

Step	Item	Pre-Setup Condition	Pre-Setup	To Adjust	Standard	Remark
1	REC Bias Voltage	Connect to DCW3 as in Fig.1-8 and read the VTVM.	Input MTT-5512 into Deck2,then press REC button.	Turn DL4 to the right and left.	105KHz±0.5KHz	MAIN PCB

1-2-3. Adjust L,R UNBALANCE

Step	Item	Pre-Setup Condition	Pre-Setup	To Adjust	Standard	Remark
1	L,R UNBAL-ANCE	Connect to DCW3 as in Fig.1-8 and read the VTVM.	Input MTT-112B into Deck2,then press PLAY button.	Turn DSVR3 to the right and left.	±0.5dB	MAIN PCB

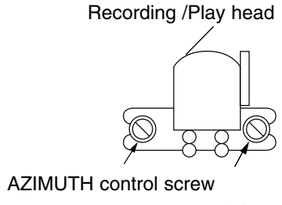


Figure 1-6

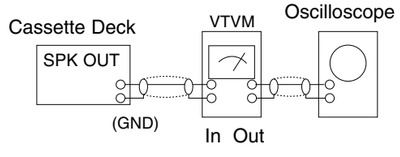


Figure 1-7

1-2-4 To Adjust PlayBack Level/REC

Notes

1) Before the actual adjustment, clean the play/recording head.
2) Measuring tape :
i) MTT-114N(or equivalent 10kHz AZIMUTH control)
ii) MTT-5512
3) The cassette deck is connections as shown in figure 1-7.

1. Adjust Deck 1 Play Level

Step	Item	Pre-Setup Condition	Pre-Setup	To Adjust	Standard	Remark
1	AZIMUTH	SPK OUT (VTVM is connected to the scope)	After putting MTT-114N into Deck 1 - Press FWD PLAY button.	- Turn the control screw to as shown in Figure 1-6.	Max output and same phase (both channels)	After adjustment secure it with REGION LOCK.
2	Play back out Level1	SPK OUT (VTVM is connected to the scope)	After putting MTT-112 into Deck 1 - Press FWD PLAY button.	- L-CH ; Turn JSR1L - R-CH ; Fixed	Max output and same phase (both channels)	

2. Adjust Deck 2 Play Level/REC BIAS

Step	Item	Pre-Setup Condition	Pre-Setup	To Adjust	Standard	Remark
1	AZIMUTH	SPK OUT (VTVM is connected to the scope)	After putting MTT-114N into Deck 2 1)Press FWD PLAY button.	- Turn the control screw to as shown in Figure 1-6.	Max output and same phase (both channels)	After adjustment secure it with REGION LOCK.
2	Recording Bias Voltage	Fig 1-8	After putting MTT-5512 into Deck 2 1)Press REC PLAY button. 2)MAIN PCB JCW3, connectted to VTVM	Turn JSR2L,JSR2R to the right and left	7mV(±0.5mV)	

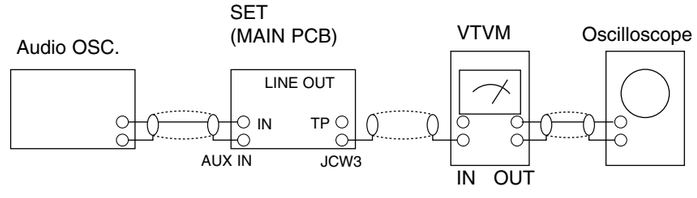


Figure 1-8